CLAIMS

1. A method of controlling transmission power in a mobile radio system in which a power control algorithm controls transmission power as a function of a transmission quality target value, wherein:

- a target value variation is applied to compensate the effects of a compressed transmission mode in which transmission is interrupted during transmission gaps and the bit rate is increased correspondingly to compensate the transmission gaps,

- said target value variation includes a first component for compensating the effects of said increase in bit rate and a second component for compensating other effects of transmission gaps,

- a corresponding anticipated variation of the transmission power is applied, and

- said anticipated variation of the transmission power corresponds to an approximate value of said target value variation obtained by a process of approximation from said second component.

2. A method according to claim 1, wherein an approximate value of said second component for a given transmission direction is obtained from the second component for the opposite transmission direction.

3. A method according to claim 1, wherein:

- said power control algorithm simultaneously controls the transmission power of at least two channels, including a data channel and a control channel, as a function of a transmission quality target value,

- the transmission power of said control channel is offset relative to the transmission power of said data channel, and

- in the event of target value variation, anticipated variations of the transmission power of the data channel and/or the transmission power of the control

channel and/or the offset of the transmission power of the control channel relative to the transmission power of the data channel are applied in order to obtain an anticipated variation of the transmission power of the data channel that corresponds to said approximate value of the target value variation.

4. A method according to claim 3, wherein, in the event of target value variation, said anticipated variations of the transmission power of the data channel and/or of the transmission power of the control channel and/or of the offset of transmission power of the control channel relative to the transmission power of the data channel are determined so that the power of the signal transmitted on the control channel is the same before and after said target value variation and over the same reference period.

5. A method according to claim 3, wherein, in the event of target value variation, an anticipated variation of the offset of the transmission power of the control channel relative to the transmission power of the data channel is applied that corresponds to the opposite of said approximate value of the target value variation.

6. A method according to claim 3, wherein, in the event of target value variation, an anticipated variation of the transmission power of the data channel and the transmission power of the control channel is applied that corresponds to said approximate value of the target value variation.

7. A method according to claim 1, wherein said target value is adjusted by an adjustment algorithm as a function of a required quality of service and said target value variation is intended, in the event of a change to the required quality of service, to anticipate the

corresponding target value variation adjusted by said adjustment algorithm.

8. A mobile radio system including, for implementing a method according to claim 1, means for applying, in the event of target value variation, an anticipated variation of the transmission power that corresponds to said approximate value of the target value variation.

9. A mobile radio system including, for implementing a method according to claim 3, means for applying, in the event of target value variation, anticipated variations of the transmission power of the data channel and/or the transmission power of the control channel and/or the offset of the transmission power of the control channel relative to the transmission power of data channel to obtain an anticipated variation of the transmission power of the data channel that corresponds to said approximate value of the target value variation.

10. A system according to claim 9, further including means such that, in the event of target value variation, said anticipated variations of the transmission power of the data channel and/or the transmission power of the control channel and/or the offset of the transmission power of the control channel relative to the transmission power of the data channel cause the signal transmitted on the control channel to have the same power before and after said target value variation and over the same reference period.

11. A system according to claim 8, including means for applying, in the event of target value variation, an anticipated variation of the offset of the transmission power of the control channel relative to the transmission power of the data channel that corresponds to the opposite of said approximate value of the target value

variation.

12. A system according to claim 8, including means for applying, in the event of target value variation, an anticipated variation of the transmission power of said data channel and the transmission power of said control channel that corresponds to said approximate value of the target value variation.

13. A base station including, for implementing a downlink power control method according to claim 1, means for applying, in the event of target value variation, an anticipated variation of the transmission power that corresponds to said approximate value of the target value variation.

14. A base station including, for implementing a downlink power control method according to claim 3, means for applying, in the event of target value variation, anticipated variations of the transmission power of the data channel and/or the transmission power of the control channel and/or the offset of the transmission power of the control channel relative to the transmission power of the data channel to obtain an anticipated variation of the transmission power of the data channel that corresponds to said approximate value of the target value variation.

15. A base station according to claim 14, further including means such that, in the event of target value variation, said anticipated variations of the transmission power of the data channel and/or the transmission power of the control channel and/or the offset of the transmission power of the control channel relative to the transmission power of the data channel cause the signal transmitted on the control channel to have the same power before and after said target value

variation and over the same reference period.

16. A base station according to claim 13, including means for applying an anticipated variation of the offset of the transmission power of the control channel relative to the transmission power of the data channel that corresponds to the opposite of said approximate value of the target value variation.

17. A base station according to claim 13, including means for applying an anticipated variation of the transmission power of said data channel and the transmission power of said control channel that corresponds to said approximate value of the target value variation.

18. A base station according to claim 13, including means for using said second component which is signaled to it by a base station controller for the purposes of uplink power control to determine said approximate value of the downlink target value variation.

19. A mobile station, including, for implementing an uplink power control method according to claim 1, means for applying, in the event of target value variation, an anticipated variation of the transmission power that corresponds to said approximate value of the target value variation.

20. A mobile station, including, for implementing an uplink power control method according to claim 3, means for applying, in the event of target value variation, anticipated variations of the transmission power of the data channel and/or the transmission power of the control channel and/or the offset of the transmission power of the control channel relative to the transmission power of the data channel to obtain an anticipated variation of

the data channel transmission power that corresponds to said approximate value of the target value variation.

21. A mobile station according to claim 20, further including means such that in the event of target value variation said anticipated variations of the transmission power of the data channel and/or the transmission power of the control channel and/or the offset of the transmission power of the control channel relative to the transmission power of the data channel cause the signal transmitted on the control channel to have the same power before and after said target variation and over the same reference period.

22. A mobile station according to claim 20, further including means for applying an anticipated variation of the offset of the transmission power of the control channel relative to the transmission power of the data channel that corresponds to the opposite of said approximate value of the target value variation.

23. A mobile station according to claim 20, further including means for applying an anticipated variation of the transmission power of said data channel and the transmission power of said control channel that corresponds to said approximate value of the target value variation.

24. A mobile station according to claim 19, further including means for using said second component which is signaled to it by a base station controller for the purposes of uplink power control to determine said approximate value of the downlink target value variation.

25. A base station controller including, for implementing the method according to claim 1, means for signaling the same value for said second component for

both transmission directions to a base station and to a mobile station.